OPERATING INSTRUCTIONS (OI) FOR HANDLING JP-8+100

PURPOSE: This OI is intended to prevent inadvertent issues of JP-8+100 to non-program aircraft and the disarming of filter separator systems. This OI supplements requirements in Technical Order 42B-1-1 and AFMAN 23-110 Volume I, Part 3, Chapter 1.

APPLICABILITY: Applies to all active duty, civil service and contractor managed fuels management activities within Department of Defense. Locations that do not have JP-8+100 systems still must be vigilant when handling product defueled from aircraft fueled outside your location. All fuels flight managers will develop local procedures, IAW paragraph 4 of this OI, to preclude the disarming of filter separator systems by JP-8+100.

BACKGROUND: The approved additive in JP-8+100 contains a detergent, which is a surface-active agent (surfactant). Surfactants disable the standard DoD and 3rd edition API 1581 filter-separator coalescer elements used to separate water from fuel. Additionally, not all DoD aircraft have been approved to use JP-8+100 additized fuel. Consequently, proactive measures must be employed to preclude disarming fuel filter separator systems and inadvertent servicing of JP-8+100 to non-program aircraft. Nonconformance to this OI could dangerously cause a catastrophic failure of a base's fuel quality control system.

PROCEDURES:

1. Fuels management flights are **NOT** authorized to issue JP-8+100 to aircraft unless the AFTO Form 781F and the DD Form 1896 indicates JP-8+100 (JP-8w100).

1.1. If fuels flights are directed to issue JP-8+100 to a non-program aircraft (the DD Form 1896/AFTO Form 781F does not indicate +100) then the AFTO Form 148 will be completed and signed by the pilot **prior** to issuing JP-8+100 to the aircraft. Follow the distribution instructions noted on the bottom of the AFTO Form 148.

1.2. If a fuels flight inadvertently issues JP-8+100 to non-program aircraft, immediately notify your Maintenance Operations Control Center or equivalent , WR-ALC/SFTH and Major Command of the incident.

- JP-8+100 shall not be issued to Navy/Marine Corps aircraft unless operational necessity dictates. (If issuance is unavoidable, the aircraft pilot shall be informed and shall sign an acknowledgment prior to the servicing.) Within 24 hours after the such servicing, a copy of the signed acknowledgment shall be telefaxed to NAVAIR AIR 4.4.5 DSN 442-7532 or commercial NR. 609-538-6532 **and** to WR-ALC/SFTH at DSN 945-2025 or commercial NR. 210-925-2025.
- JP-8+100 shall not be issued to contract carriers, commercial aircraft, or foreign military or commercial aircraft unless operational or emergency requirements dictate. If issuance becomes necessary, the aircraft pilot will sign an acknowledgment. A copy of all signed releases shall be telefaxed to WR-ALC/SFTH at DSN 945-2025 or commercial number (210) 925-2025.
- **In-Flight Refueling.** Because of the requirement to support aircraft not involved in the JP-8+100 program, as well as JP-8+100 aircraft, tanker aircraft will dispense only JP-8 (without the thermal stability additive). Periodic use of fuel other than JP-8+100 will not have a detrimental effect on JP-8+100 aircraft. Demonstration

program aircraft frequently refuel in-flight and at deployment locations with regular JP-8. Since the process of building up gum and coke deposits is a gradual process, periodic use of regular JP-8 has not significantly reduced the benefit of using JP-8+100.

2. Refuelers will have absorption type filter elements installed prior to being placed in JP-8+100 refuel or defuel service.
2.1. Refuelers will be clearly marked “JP-8+100” or “JP-8” to distinguish between the type of product handled by each refueler. Ensure clipboards are clearly marked as appropriate.
2.2. Establish a lock control system to ensure JP-8 refuelers are not filled with JP-8+100.

3. For aircraft involved in the JP-8+100 program emboss the Jet Fuel Identaplate, DD Form 1896, on line 2, blocks 13 through 20 as follows: “JP-8W100”. (Note: the embossing machines do not have a “+” symbol and “w” is to be used to represent JP-8 “with” 100.)

4. Fuels managers will develop local procedures to ensure compliance with this OI. As a minimum the following requirements will be addressed in local procedures:
4.1. How physical constraints will be implemented to prevent inadvertent loading of a refueler with JP-8+100. Fuels manager must ensure whichever physical constraint is utilized is executed and meets the requirement to prevent commingling of product (JP-8 versus JP-8+100).
4.2. Procedures for handling defuels and bowsers containing JP-8+100 product, to ensure all quality control requirements are met and transfers of JP-8+100 to bulk fuel tanks are diluted at a minimum ratio of 100 parts regular JP8 to 1 part JP-8+100.

5. Options available for handling defuels of JP-8+100 product:
5.1. Perform one-time defuels of JP-8+100 into in-service JP-8+100 refuelers. If a one-time defuel is performed unit does not require sampling before issuing product as JP-8+100. However, if the defuel is being performed due to an incident or a suspected fuel quality problem, then every effort will be made to defuel the product into a bowser or a dedicated defuel unit. Anytime you suspect contamination for any reason, isolate the unit and take appropriate actions IAW T.O. 42B-1-1.
5.2 Dedicate one unit if possible as a JP-8+100 defueler and perform multiple JP-8+100 defuels into that defueler. Once the JP-8+100 defueler is full, return the unit contents to a Hush House, or Aerospace Ground Equipment (AGE) JP-8 tanks. If AGE or a Hush House cannot or will not accept the contents, return the product to bulk storage at a ratio of 1:100. If a 1:100 ratio is not achievable in the bulk storage tanks place unit on QC Hold, sample truck IAW T.O. 42B-1-1, Table 5-1, Item 8 (solids, DP, and water). If the fuel meets specifications issue product to aircraft as JP-8+100.
5.3. Collect defuel into a bowser and sample product for color, solids, and water. Once it is determined that the fuel is satisfactory for use, return it to bulk storage at a 1:100 ratio.
5.4. Use an in-service JP-8 defuel unit when bowsers are not operationally convenient. Reissue defueled JP-8+100 to AGE equipment, a Hush House, or aircraft involved in the JP-8+100 program. Only as a last option, return defueled product to bulk storage at a 1:100 ratio. If the JP-8 unit used is not equipped with absorbent media filters then the coalescer elements will require replacing immediately after issuing out JP-8+100.

5.5. For all JP-8+100 RTB's: If the receipt line being used for the return to storage is equipped with a filter separator, then it must contain elements designed for use w/JP-8+100. If not, the filter separator must be bypassed during the return.
5.6. If possible, and with direction from the appropriate System Program Office, burn off the remaining fuel in the aircraft while taxing on the ground.
5.7. If the fuels management flight is requested/directed to perform an off-station JP-8+100 defuel at a commercial site:
5.7.1. Fuels personnel must advise the requester that JP-8+100 can't be defueled into refuelers or aviation fuel systems that are not equipped with JP-8+100 compatible filter separator elements unless elements are going to be changed immediately after handling JP-8+100.
5.7.2. The options are to transport a JP-8+100 refueler or bowser, from the nearest military installation to defuel the aircraft. Second alternative, is to have the product collected into a container and blended back to Jet A/Jet A-1 inventories at a 1:100 ratio (bypassing all filter separators until blend ratio is achieved).

6. **HANDLING JP-8+100 FUEL BOWSERS:**
6.1. The preferred method is to return all serviceable JP-8+100 product to hush houses or Age and not RTB. Additionally, all collection containers for JP-8+100 and JP-8 should be segregated and appropriately labeled.
6.2. If fuel bowsers cannot be returned to hush houses or AGE follow the procedures provided in T.O. 42B-1-1 para. 3-16 and T.O. 42B-1-23 para. 2-3f.